REMARKS

Applicant expresses appreciation to the Examiners for the further interview granted to applicant's representative. As discussed at the interview, applicant has amended independent claims 1 and 28 as proposed, which, as noted in the interview summary, "appeared to overcome the art rejection of record."

Accordingly, by this paper, claims 1-4, 8, 13, 18, 19, and 21-38 are presented for reconsideration.

Initially, Applicants note that the Office Action objects to claim 21 as depending from a cancelled claim. Claim 20 has been amended to correct its dependency, so that it now depends from claim 1.[1]

As presented herein, claims 1 and 28 are directed to a method and a corresponding computer program product for implementing a method for efficiently searching the interactive broadcast data text descriptions of a video transmission in response to a string of text input by a user in order to identify the particular interactive broadcast data desired by the user. The method is adapted for use in a system that includes a television and a video transmission medium, wherein interactive broadcast data such as electronic program guide information, news headlines, sports scores, or other similar kinds of periodically updated information that can be displayed as text simultaneously with other programming is transmitted across the video transmission medium. The system also includes a management system having a digital processor for processing one or more unique digital signatures that correspond to the interactive broadcast data, and an input device for inputting other digital data that corresponds to user instructions input by a user when searching for particular interactive broadcast data.

As defined by the independent claims, the method is comprised of a step for "receiving interactive broadcast data at the management system, said interactive broadcast data having unique binary signatures that uniquely identify the interactive broadcast data text descriptions." Further, each of the unique binary signatures is "created prior to transmission across the video transmission medium using a first function adapted to convert the interactive broadcast data into the unique binary signatures." The conversion results in each of the "unique binary signatures

[1] The Office Action also objected to claim 4, noting that in the remarks the claim 4 was referenced as cancelled. Claim 4 was not cancelled in the Amendment A, and the reference to its cancellation in the remarks was simply a typographical error. Claim 4 continues to be pending in this paper, as in the last.

having a fixed number of bytes." The unique binary signatures are then stored at the management system.

The method next requires a step for a user-entered text string to be input from the input device to the management system. This is followed by a step for "selecting and using a second function that is adapted to convert the user-entered text string into a unique binary signature that is stored at the management system."[2] The unique binary signature of the user-entered text string has the same number of fixed bytes as the unique binary signature converted by the first function for the interactive broadcast data.

Lastly, the method involves steps for retrieving and comparing the unique binary signatures of the interactive broadcast data text descriptions to the unique binary signature of the user-entered text string, and then, based on the comparison, the management system identifies one and only one item of interactive broadcast data that matches the input text string, otherwise the management system identifies no match.

As noted at the interview, the claimed method significantly improves the speed and efficiency of searching interactive broadcast data such as an electronic program guide or other periodically updated program information, as noted.

In the Final Action the claims except 22, 26, 32 and 33 were again rejected under 35 U.S.C. 103(a) as being unpatentable over Bruette (U.S. Patent No. 6,708,336) in view of Chidlovskii (U.S. Patent No. 6,347,314). Claims 22 and 26 were again rejected under 35 U.S.C. 103(a) as being unpatentable over Bruette (U.S. Patent No. 6,708,336) in view of Chidlovskii (U.S. Patent No. 6,347,314) as discussed above and further in view of Kessels, et al. (U.S. Patent No. 4,598,385), and claims 32 and 33 were rejected as obvious over Bruette in view of Kessels and further in view of U. S. Pat. No. 6,480,835 (Light).[3]

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[2] As discussed at the interview, the phrase "a second function [that is different from the first function]" was amended at the suggestion of the Examiner to remove the bracketed portion because it was viewed as somewhat redundant and unnecessary in view of the term "second" function, which makes it evident that the "second" function is something different than the "first" function previously referred to in the claim.

[3] Both Bruette and Chidlovskii qualify as "prior art," if at all, under 35 U.S.C. § 102(e), and Light qualifies, if at all, under 35 U.S.C. § 102(a). Applicant reserves the right to challenge whether any of these references properly qualify in terms of being prior to applicant's date of invention, and therefore, any reference to any of these references is made merely for purposes of argument, and should thus not be construed as any admission that such reference is a proper qualifying reference.

As discussed at the interview, the primary reference to Bruette discloses a method of transparently (i.e., without being apparent to the user) generating a database such as an electronic program guide (EPG) as shown in Figure 2, and a method for searching the EPG. As explained by Bruette (see column 5, lines 18 – 67 and column 6, lines 1 – 5), the call sign of each channel is converted into a decimal number using Table 1. The decimal number is stored in a column (column n, figure 2), and later used to identify the channel number when the call sign is input using a keypad. For example, inputting "ABC" with the keypad results in producing the decimal number 111 using Table 1, which in turn identifies channel 02 (see figure 2).

However, the decimal numbers produced by Table 1 are not necessarily unique. As shown in Figure 2, some call signs such as "CBS" and "CNN" will result in the same decimal number (e.g., 155). This in turn requires further processing methodology to resolve the ambiguity, as described by Bruette at column 6, lines 41 – 58. Further, some call signs may produce a decimal number (such as call sign "DIS" which results in the decimal number 237) that is a "subset" of another call sign (such as "DISC" with its corresponding decimal number of 2371 based on Table 1). Again, this is a further ambiguity that requires additional methodology to resolve, as disclosed at column 6, lines 59 – 67 and column 7 lines 1 – 8.

Bruette clearly does not teach a search methodology receives interactive broadcast data having a unique binary signature created prior to transmission across the video transmission medium, and then selecting and using a second function that converts user-entered text into a unique binary signature having the same number of fixed bytes and which can then be used to identify one and only unique item of the interactive broadcast data (e.g., a unique entry in a program guide for example).

Chidlovskii, on the other hand, discloses an internet search protocol (not video transmission), in which a client query is hashed to produce a signature that is cached at the client, and then used to match a subsequent search query by the client. However, Chidlovskii does not teach using first and second functions that are different from one another but that nonetheless produce the same number of fixed bytes. Moreover, and in any event, Chidlovskii is not properly combinable with Bruette. In particular, one of skill in the art would not be motivated to perform a conversion of either the call signs or decimals (columns (b) and (n) of figure 2) given that the heart of Bruette's search methodology already relies on the conversion of call signs to decimal numbers using Table 1. To convert the calls signs to digital signatures would require

one to completely disregard the decimal conversion conceived by Bruette using Table 1, which as noted, is central to Bruette's invention. Moreover, there clearly would be no motivation to hash the decimal numbers, since that would render the decimal conversion absolutely useless and of no value. Thus, to combine Chidlovskii with Bruette is improper, because it would effectively require one to eviscerate or ignore the principal thrust of Bruette's invention.

Thus, for at least these reasons, and as acknowledged at the interview the "proposed amendments . . . appear to overcome the art rejection of record." The prior art of record does not anticipate or make obvious, either singly or in combination, the claims as presented herein for reconsideration. Accordingly, favorable action and allowance is courteously requested.

In the event the Examiner finds any remaining impediment to allowance that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney.

Dated this 26th day of April, 2006.

Respectfully submitted,

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